-- Step 1 is a design process for designing a circuit of a semiconductor device. Step 2 is a process for making a mask on the basis of the circuit pattern design. Step 3 is a process for preparing a wafer by using a material such as silicon. Step 4 is a wafer process (called a pre-process) wherein, by using the so prepared mask and wafer, circuits are practically formed on the wafer through lithography. Step 5 subsequent to this is an assembling step (called a post-process) wherein the wafer having been processed by step 4 is formed into semiconductor chips. This step includes an assembling (dicing and bonding) process and a packaging (chip sealing) process. Step 5 is an inspection step wherein an operation check, a durability check and so on for the semiconductor devices provided by step 5, are carried out. With these processes, semiconductor devices are completed and they are shipped (step 7). --

IN THE CLAIMS:

Please AMEND claims 1-4, 7, 9, 11-17, 20, 22-25, 27, 28 and 32-45 as follows. A marked-up copy of the amended claims showing the changes made thereto is attached. Note that all the claims currently pending in this application, including those not currently being amended, have been reproduced below for the Examiner's convenience.

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1. (Amended) A substrate attracting and holding method, comprising the steps of:

supporting a substrate by use of a protrusion provided on a holding table for holding the substrate, wherein the protrusion is disposed to be placed in a predetermined

positional relation, with respect to a direction along the surface of the substrate, with (i) a position of an alignment mark to be used for processing the substrate or (ii) a position with respect to which an alignment mark is to be produced; and

reducing pressure between the holding table and the substrate to attract and hold the substrate.

2. (Amended) A method according to Claim 1, wherein the substrate is supported so that the position of the alignment mark or the position with respect to which the alignment mark is to be produced is placed above the protrusion.

3. (Amended) A method according to Claim 1, wherein the substrate is supported so that the position of the alignment mark or the position with respect to which the alignment mark is to be produced is placed at a central portion in relation to disposition of the protrusion.

4. (Amended) A method according to Claim 1, wherein the substrate is supported so that, for different processing regions of the substrate, the protrusion is placed at the same position.

5. A method according to Claim 1, wherein the substrate is supported so that the protrusion is placed at the same position with reference to the position of the alignment mark or the position with respect to which the alignment mark is to be produced.

6. A method according to Claim 1, wherein the position of the alignment mark or the position with respect to which the alignment mark is to be produced is placed aoutside a processing region of the substrate.

7. (Amended) A method according to Claim 1, wherein at least a portion of the protrusion surrounds a zone corresponding to the position of the alignment mark or the position with respect to which the alignment mark is to be produced.

8. A method according to Claim 1, wherein the protrusion comprises at least one of a rim type protrusion and a pin contact type protrusion.

9. (Amended) A method according to Claim 1, further comprising adjusting the pressure of air between the holding table and the substrate.

10. A method according to Claim 9, wherein a substrate attracting force in a processing region of the substrate is adjusted even for the whole substrate.

11. (Amended) A method according to Claim 1, wherein at least a portion of the protrusion surrounds a zone corresponding to the position of the alignment mark of the position with respect to which the alignment mark is to be produced, and further comprising adjusting the

pressure of air between the holding table and the substrate in a region as surrounded by the protrusion.

12. (Amended) A method according to Claim 1, further comprising performing position adjustment so that a predetermined positional relationship is defined between the protrusion of the holding table and the alignment mark or the position with respect to which the alignment mark is to be produced.

13. (Amended) A substrate attracting and holding method, comprising the steps of:

supporting a substrate by use of a protrusion provided on a holding table for holding the substrate, wherein the protrusion is disposed to be placed in a predetermined positional relation, with respect to a direction along the surface of the substrate, and has an attracting groove for attracting the substrate; and

reducing pressure between the holding table and the substrate to attract and hold the substrate.

14. (Amended) A substrate attracting and holding system, comprising:

a holding table for holding a substrate;

a protrusion provided on said holding table, said protrusion being disposed to be placed in a predetermined positional relationship, with respect to a direction along the surface of

the substrate, with (i) a position of an alignment mark to be used for processing the substrate or (ii) a position with respect to which an alignment mark is to be produced.

15. (Amended) A system according to Claim 14, wherein the protrusion is disposed so that the position of the alignment mark or the position with respect to which the alignment mark is to be produced is placed above the protrusion.

16. (Amended) A system according to Claim 14, wherein the protrusion is disposed so that the position of the alignment mark or the position with respect to which the alignment mark is to be produced is placed at a central portion in relation to disposition of the protrusion.

17. (Amended) A system according to Claim 14, wherein the protrusion is provided so that, for different processing regions of the substrate, the protrusion is placed at the same position.

18. A system according to Claim 14, wherein the protrusion is provided so that the protrusion is placed at the same position with reference to the position of the alignment mark or the position with respect to which the alignment mark is to be produced.

19. A system according to Claim 14, wherein the position of the alignment mark or the position with respect to which the alignment mark is to be produced is placed outside a processing region of the substrate.

20. (Amended) A system according to Claim 14, wherein at least a portion of the protrusion is disposed to surround a zone corresponding to the position of the alignment mark of the position with respect to which the alignment mark is to be produced.

21. A system according to Claim 14, wherein the protrusion comprises at least one of a rim type protrusion and a pin contact type protrusion.

22. (Amended) A system according to claim 14, further comprising a mechanism for reducing pressure between said holding table and the substrate.

23. (Amended) A system according to Claim 22, wherein said mechanism comprises a pressure adjusting mechanism for adjusting [a] pressure of [an] air between said holding table and the substrate.

24. (Amended) A system according to Claim 23, wherein said pressure adjusting mechanism is arranged to produce a substrate attracting force in a processing region of the substrate, which force is even for the whole substrate.

25. (Amended) A system according to Claim 14, wherein at least a portion of the protrusion is disposed to surround a zone corresponding to the position of the alignment mark or the position with respect to which the alignment mark is to be produced, and said system further comprises a pressure adjusting mechanism for adjusting pressure of air between said holding table and the substrate in a region as surrounded by the protrusion.

26. A system according to Claim 14, further comprising a position adjusting mechanism for adjusting a relative position of the protrusion of said holding table and the alignment mark or the position with respect to which the alignment mark is to be produced, so that a predetermined positional relationship is defined between them.

27. (Amended) An exposure apparatus, comprising:

a holding table for holding a substrate;

a protrusion provided on said holding table, said protrusion being disposed to be placed in a predetermined positional relationship, with respect to a direction along the surface of the substrate, with (i) a position of an alignment mark to be used for processing the substrate or (ii) a position with respect to which an alignment mark is to be produced; and

exposure means for transferring, by exposure, a pattern of an original to the substrate as attracted and held by said holding table.

28. (Amended) An apparatus according to Claim 28, further comprising a controller for calculating an error in coordinates of an alignment mark to be produced as a result of deformation of the substrate as the substrate is attracted, on the basis of a positional relationship between the protrusion and the alignment mark of the substrate.

29. An apparatus according to Claim 28, wherein said controller has one of a function and a table for calculating the error on the basis of the positional relationship between the protrusion and the alignment mark of the substrate.

30. An apparatus according to Claim 28, wherein said controller is operable to correct the position of the alignment mark as measured, on the basis of the calculated error in coordinates of the alignment mark.

31. An apparatus according to Claim 28, wherein said controller is operable to perform alignment of the substrate on the basis of the error in coordinates of the alignment mark.

32. (Amended) A device manufacturing method, comprising the steps of:

supporting a substrate by use of a protrusion provided on a holding table for holding the substrate, wherein the protrusion is disposed to be placed in a predetermined positional relation, with respect to a direction along the surface of the substrate, with (i) a

position of an alignment mark to be used for processing the substrate or (ii) a position with respect to which an alignment mark is to be produced;

reducing pressure between the holding table and the substrate to attract and hold the substrate; and

printing a pattern of an original on the substrate as attracted by the holding table.

33. (Amended) A substrate attracting and holding system, comprising:

a holding table for holding a substrate;

a protrusion for supporting the substrate and having an attraction groove for attracting the substrate, wherein the protrusion is disposed to be placed in a predetermined positional relation, with respect to a direction along the surface of the substrate; and

a pressure adjusting mechanism for adjusting pressure between said holding table and the substrate.

34. (Amended) A substrate attracting and holding system comprising:

a plurality of protrusions for supporting a substrate, for attracting and holding the substrate supported on the protrusions, wherein a disposition pitch L of the protrusions and an attraction force P of the substrate are set so as to satisfy a relation:

$$P \cdot L^3 \leq [36 \cdot E \cdot h^2 \cdot dxdy] / \sqrt{3} \cdot k \cdot c]$$

where dxdy is a distortion tolerance, E is a longitudinal elasticity coefficient, h is a thickness of the substrate, c is a correction coefficient based on the protrusion disposition and k is a neutral plane coefficient.

35. (Amended) A substrate attracting and holding system comprising:

a plurality of protrusions for supporting a substrate, for attracting and holding the substrate supported on the protrusions, wherein a disposition pitch L of the protrusions and an attraction force P of the substrate are set so as to satisfy a relation:

$$P \cdot L^3 \leq 0.00427.$$

36. (Amended) A system according to Claim 34 or 35, wherein the disposition pitch L and the substrate attraction force P are set to further satisfy relations:

$$G \cdot h \cdot \rho / \mu \leq P \leq 100000$$

$$0.0005 \leq L \leq 0.005,$$

wherein h is a thickness of the substrate, ρ is a density of the substrate, μ is a stationary friction coefficient of the substrate, and G is a maximum acceleration of a stage on which said substrate attracting and holding system is mounted.

37. (Amended) A substrate attracting and holding system comprising:

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a plurality of protrusions for supporting a substrate, for attracting and holding the substrate supported on the protrusions, wherein a disposition pitch L of the protrusions and an attraction force P of the substrate are set so as to satisfy relations:

$$P \cdot L^3 \leq 0.00427$$

$$33 \leq P \leq 100000, \text{ and}$$

$$0.0005 \leq L \leq 0.005.$$

38. (Amended) A substrate attracting and holding system comprising:

a plurality of protrusions for supporting a substrate, for attracting and holding the substrate supported on the protrusions, wherein the protrusions include an outer peripheral protrusion for supporting an outer peripheral portion of the substrate and a central protrusion for supporting a central portion of the substrate, inside the peripheral portion thereof, and that, when a disposition pitch of the central protrusion is La and an attraction force of the substrate at the central protrusion is Pa while a disposition pitch between the outer peripheral protrusion and a central protrusion juxtaposed inside the outer peripheral protrusion is Lb and an attraction force of the substrate between the outer peripheral protrusion and a central protrusion juxtaposed inside the outer peripheral protrusion is Pb, the disposition pitches Pa and Pb are set so as to satisfy relations:

$$Pa \cdot La^3 \leq [36 \cdot E \cdot h^2 \cdot dxdy]/[\sqrt{3} \cdot k \cdot c]$$

$$Pb \cdot Lb^3 \leq [8 \cdot E \cdot h^2 \cdot dxdy]/[k \cdot c],$$

where dxdy is a distortion tolerance, E is a longitudinal elasticity coefficient, h is a thickness of the substrate, c is a correction coefficient based on the protrusion disposition and k is a neutral plane correction coefficient.

39. (Amended) A substrate attracting and holding system comprising:

a plurality of protrusions for supporting a substrate, for attracting and holding the substrate supported on the protrusions, wherein the protrusions include an outer peripheral protrusion for supporting an outer peripheral portion of the substrate and a central protrusion for supporting a central portion of the substrate, inside the peripheral portion thereof, and that, when a disposition pitch of the central protrusion is La and an attraction force of the substrate at the central protrusion is Pa while a disposition pitch between the outer peripheral protrusion and a central protrusion juxtaposed inside the outer peripheral protrusion Lb and an attraction force of the substrate between the outer peripheral protrusion and a central protrusion juxtaposed inside the outer peripheral protrusion is Pb, the disposition pitches La and Lb and the attraction forces Pa and Pb are set so as to satisfy relations:

$Pa \cdot La^3 \leq 0.00427$; and

$Pb \cdot Lb^3 \leq 0.00164$.

40. (Amended) A substrate attracting and holding system comprising:

a plurality of protrusions for supporting a substrate, for attracting and holding the substrate supported on the protrusions, wherein the protrusions include an outer peripheral

protrusion for supporting an outer peripheral portion of the substrate and a central protrusion for supporting a central portion of the substrate, inside the peripheral portion thereof, and that, when a disposition pitch of the central protrusion is La and an attraction force of the substrate at the central protrusion is Pa while a disposition pitch between the outer peripheral protrusion and a central protrusion juxtaposed inside the outer peripheral protrusion is Lb and an attraction force of the substrate between the outer peripheral protrusion and a central protrusion juxtaposed inside the outer peripheral protrusion is Pb, the disposition pitches La and Lb and the attraction forces Pa and Pb are set so as to satisfy relations:

$Pa \cdot La^3 \leq 0.00427$

$33 \leq Pa \leq 100000$

$0.0005 \leq La \leq 0.005$

$Pb \cdot Lb^3 \leq 0.00164$

$33 \leq Pb \leq 100000$; and

$0.0005 \leq Lb \leq 0.005$.

41. (Amended) A substrate attracting and holding system comprising:

a plurality of protrusions for supporting a substrate, for attracting and holding the substrate supported on the protrusions, wherein the protrusions include an outer peripheral protrusion for supporting an outer peripheral portion of the substrate and a central protrusion for supporting a central portion of the substrate, inside the peripheral portion thereof, that a disposition pitch of the central protrusion is made larger than a disposition pitch between the

outer peripheral protrusion and a central protrusion juxtaposed inside the outer peripheral protrusion, and that an attraction force of the substrate at the central protrusion is made smaller than an attraction force of the substrate between the outer peripheral protrusion and a central protrusion juxtaposed inside the outer peripheral protrusion.

42. (Amended) A substrate attracting and holding system comprising:

a plurality of protrusions for supporting a substrate, for attracting and holding the substrate supported on the protrusions, wherein the protrusions include an outer peripheral protrusion for supporting an outer peripheral portion of the substrate and a central protrusion for supporting a central portion of the substrate, inside the peripheral portion thereof, that a disposition pitch of the central protrusion is made not less than a disposition pitch between the outer peripheral protrusion and a central protrusion juxtaposed inside the outer peripheral protrusion, and that an attraction force of the substrate at the central protrusion is made larger than an attraction force of the substrate between the outer peripheral protrusion and a central protrusion juxtaposed inside the outer peripheral protrusion.

43. (Amended) A system according to any one of Claim 34, 35 or 37- 42, wherein a free end of the protrusion is formed into a spherical shape.

44. (Amended) An exposure apparatus, comprising:

a substrate attracting and holding system as recited in any one of Claims 34, 35 or 37-42; and

exposure means for transferring, by exposure, a pattern of an original to a substrate as attracted and held by said substrate attracting and holding system.

45. (Amended) A device manufacturing method, comprising:

producing a device through manufacturing processes including a process for exposing a substrate by use of an exposure apparatus as recited in Claim 44.

46. A system according to Claim 36, wherein a free end of the protrusion is formed into a spherical shape.

47. An exposure apparatus, comprising:

a substrate attracting and holding system as recited in Claim 36; and

exposure means for transferring, by exposure, a pattern of an original to a substrate as attracted and held by said substrate attracting and holding system.

48. An exposure apparatus, comprising:

a substrate attracting and holding system as recited in Claim 43; and

exposure means for transferring, by exposure, a pattern of an original to a substrate as attracted and held by said substrate attracting and holding system.

49. An exposure apparatus, comprising:

a substrate attracting and holding system as recited in Claim 46; and

exposure means for transferring, by exposure, a pattern of an original to a substrate as attracted and held by said substrate attracting and holding system.

50. A device manufacturing method, characterized by producing a device through manufacturing processes including a process for exposing a substrate by use of an exposure apparatus as recited in Claim 47.

51. A device manufacturing method, characterized by producing a device through manufacturing processes including a process for exposing a substrate by use of an exposure apparatus as recited in Claim 48.

52. A device manufacturing method, characterized by producing a device through manufacturing processes including a process for exposing a substrate by use of an exposure apparatus as recited in Claim 49.